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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/713,188	11/17/2003	Jin Li	M4065.0978/P978	9559
24998	7590	02/28/2007		
DICKSTEIN SHAPIRO LLP 1825 EYE STREET NW Washington, DC 20006-5403			EXAMINER OLSEN, ALLAN W	
			ART UNIT	PAPER NUMBER
			1763	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		02/28/2007	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/713,188

Applicant(s)

LI, JIN

Examiner

Allan Olsen

Art Unit

1763

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 December 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-60 is/are pending in the application.
- 4a) Of the above claim(s) 5,7-26,28,42-45,47 and 55-60 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4,6,27,29-41,46 and 48-54 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

Claims 5, 7-26, 28, 42-45, 47 and 55-60 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected species, there being no allowable generic or linking claim. Applicant timely traversed the election requirement in the reply filed on.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claims 1-4, 27, 29-33, 35-40, 46, 48-52 and 54 are rejected under 35 U.S.C. 102(a) as being anticipated by EP 1 329 432 A1 (hereinafter, Tsunetomo)

Tsunetomo teaches forming a mold for micro-lenses by etching a multilayered substrate wherein the different layers have differing etch rates. See paragraphs 41-50 and 55-60.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 6 and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsunetomo as applied to claims 1 and 38 above.

Tsunetomo does not teach that the first layer is a layer of Silane PECVD, and the at least one second layer is a layer of borophosphosilicate glass (3.8/6.9) WJ RTP and anneal, while the substrate is TEOS PECVD densified, and the etchant is about ten percent hydrogen fluoride by volume in distilled water.

It would have been obvious to one skilled in the art to appropriately change and optimize the composition of the Tsunetomo's various layers so that the various etching rates would produce a mold having the desired shape. As noted by applicant:

[0020] As is known in the art, the way in which a material is formed can affect the rate at which a particular etchant will etch the material. For example, as shown in FIG. 10, a borophosphosilicate glass (BPSG), which is about 2.7 percent boron by weight and 7.2 percent phosphorus by weight, material deposited in a Watkins-Johnson machine (WJ) using a rapid temperature process (RTP) and anneal is etched at a rate of about 242 Angstroms/minute (A/min) by a solution of one percent by volume hydrogen fluoride in distilled water (HF 100:1), whereas a BPSG densified material, which is about 3.0 percent boron by weight and 7.6 percent phosphorus by weight, deposited in a Centura machine is etched by the same etchant at a rate of 1130 A/min. Thus, a BPSG (2.7/7.2) WJ RTP and anneal material is different than a BSPG (3.0/7.6) Centura densified material. For simplicity, the weight percents of boron and phosphorus in a BPSG material are indicated herein by the following notation: (weight percent boron/weight percent phosphorus).

Claims 34 and 53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsunetomo, as applied to claims 1 and 38 above, in view of US Patent 5,708,493 issued to Ahsbahs et al. (hereinafter, Ahsbahs).

Tsunetomo does not teach forming inorganic lenses by filling the mold with inorganic lens material.

Ahsbahs teaches that the molding technique is used to create lenses made from both organic and inorganic materials (column 8, lines 38-39).

It would have been obvious to one skilled in the art to use the mold of Tsunetomo to make inorganic lenses because Ahsbahs teaches that molding may be used to make inorganic lenses, which are known to be more scratch resistant than their organic counterpart. Also, because Tsunetomo's mold is made from inorganic material it could withstand the processing conditions used for inorganic lenses.

Response to Arguments

Applicant's arguments filed December 11, 2006 have been fully considered but they are not persuasive. Applicant argues that Tsunetomo does not teach, "providing an etchant in the first opening to etch both the substrate and the first layer to form a first mold for a first micro-lens, the etchant etches the first layer at a different rate than the substrate." Applicant points to the process disclosed at column 6, lines 34-40 of Tsunetomo which is depicted in figure 5. However, figure 9 of Tsunetomo depicts the claimed feature of etching the layer formed on a substrate and etching the substrate as well. Also of particular relevance is Tsunetomo's teaching at column 9, lines 51-55, which reads:

"For example, a layer having an etching rate different from an etching rate of a substrate may be formed on the substrate, and not only that layer but also the substrate may be etched."

With respect to claim 38, which requires the etching of three layers, applicant points to figure 9, which depicts two layers being etched. Applicant reasons that because the size of the opening in the Cr mask layer does not change, the Cr mask layer cannot be considered to read on one of the claimed layers because the Cr mask layer is not etched. However, Tsunetomo's teachings read on the claims without relying on the Cr mask layer as being one of the claimed layers. The Tsunetomo discloses that layer SiO₂ layer (e.g., 2, 20, 28), may comprise a laminate of, for example, 20 or so layers. See: column 5, lines 30-35; column 6, lines 30-35; and column 7, lines 22-35.

Regarding the rejection under 35 U.S.C. 103 of claims 34 and 53, applicant argues the rejection set forth by the examiner fails to establish the requisite motivation for one skilled in the art to combine teachings of the applied references.

Applicants argues the examiner "merely describe one advantage of inorganic lenses over organic lenses, but [does] not explain why one of ordinary skill in the art would be motivated to combine the process of Tsunetomo with the raw material taught by Ahsbahs to produce inorganic lenses when Ahsbahs already discloses a process to make inorganic lenses."

The examiner respectfully disagrees. Ahsbahs does not teach any specifics regarding a process of forming inorganic lenses. Ahsbahs merely provides a generic teaching that lenses can be molded from both organic and inorganic material. With respect to one motivation to make an inorganic lens the examiner noted that inorganic lenses are known to be more scratch resistant than their organic counterpart.

Therefore, one desiring to mold an aspherical inorganic lens would naturally fill Tsunetomo's aspherical mold with an inorganic material.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Allan Olsen whose telephone number is 571-272-1441. The examiner can normally be reached on M, W and F: 1-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Parviz Hassanzadeh can be reached on 571-272-1435. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read "Allan Olsen". The signature is written in a cursive style with a large, looped "O" at the end.

Allan Olsen
Primary Examiner
Art Unit 1763